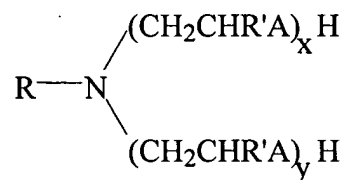


Abstract of Disclosure

A method of controlling and delaying the inversion of a drilling fluid and the wettability of a filtercake by using a delayed phase changing agent. The filtercake is preferably formed while drilling a subterranean formation using a drilling fluid includes: an oleaginous fluid; a non-oleaginous fluid; an amine surfactant having the structure:



wherein R is a C₁₂-C₂₂ aliphatic hydrocarbon; R' is an independently selectable from hydrogen or C₁ to C₃ alkyl; A is NH or O, and 1 ≤ x+y ≤

3. In the method, the filter cake is exposed to a delayed phase changing agent selected from the group consisting of aliphatic amine acids, salts of aliphatic amine acids and combinations thereof. In one preferred illustrative embodiment, the delayed phase changing agent is delivered in the form of a pill, the pill including a carrier fluid, a viscosifier and the delayed phase changing agent. The delayed phase changing agent may be selected from ethylene diamine tetraacetic acid, alkali metal salts of ethylene diamine tetraacetic acid and combinations of these and similar compounds.